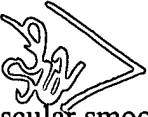



1 2. (Once Amended) The device of claim 1, wherein the tubular elongate
2 member is comprised of a porous synthetic material.

1 3. (Once Amended) The device of claim 2, wherein the porous synthetic
2 material is polytetrafluoroethylene (PTFE), dacron or nylon.


1 4. (Once Amended) The device of claim 3, wherein the tubular elongate
2 member is a vascular graft.


1  5. (Once Amended) The device of claim 1, wherein the autologous
2 vascular smooth muscle cells are transduced with a gene encoding erythropoietin.

1  6. (Twice Amended) The device of claim 1, wherein the autologous
2 vascular smooth muscle cells are transduced with a gene encoding granulocyte colony
3 stimulating factor or granulocyte macrophage colony stimulating factor.

1 7. (Twice Amended) The device of claim 1, wherein the autologous
2 vascular smooth muscle cells are transduced with a gene encoding Factor IX.

1 8. (Twice Amended) The device of claim 1, wherein the transduced
2 autologous vascular smooth muscle cells express an anticoagulant.

1  9. (Once Amended) The device of claim 1, wherein the transduced
2 autologous vascular smooth muscle cells are immobilized to the tubular elongate member with
3 a polymer.

1  10. (Twice Amended) The device of claim 1, wherein the device, prior to
2 implantation in a subject, further comprises autologous vascular endothelial cells adherent to
3 an interior surface of the tubular smooth muscle cell complex.

1 11. (Thrice Amended) A method for preparing a vascular graft seeded ex
2 vivo with vascular smooth muscle cells transduced to express a gene of interest, comprising the
3 steps of:

4 transducing mammalian vascular smooth muscle cells with the gene of interest
5 operably linked to a promoter for expression;

6 and immobilizing the transduced vascular smooth muscle cells on a vascular
7 graft surface, whereby the smooth muscle cells remain stably immobilized on the graft surface
8 and express a product of said gene, thereby producing said vascular graft having vascular
9 smooth muscle cells transduced to express a gene of interest.

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1 12. (Once Amended) The method of claim 11, wherein the gene encodes
2 erythropoietin, granulocyte colony stimulating factor, granulocyte macrophage colony
3 stimulating factor, or Factor IX.

1 13. (Thrice Amended) The method of claim 11, wherein the gene encodes
2 erythropoietin.

1 14. (Thrice Amended) The method claim 11, wherein the gene encodes
2 Factor IX.

1 15. (Thrice Amended) The method of claim 11, wherein the gene encodes
2 granulocyte colony stimulating factor or granulocyte macrophage colony stimulating factor.

1 16. (Thrice Amended) The method of claim 11, wherein the transduced
2 cells constitutively express an anticoagulant protein.

1 17. (Once Amended) The method of claim 16, wherein the anticoagulant is
2 a plasminogen activator or antithrombin-III.

1 18. (Once Amended) The method of claim 17, wherein the plasminogen
2 activator is alteplase or urokinase.

1 19. (Four Times Amended) The method of claim 11, wherein the gene of
2 interest encodes insulin or proinsulin polypeptide, and wherein the transduced cells express
3 insulin or proinsulin polypeptide.

1 20. (Thrice Amended) A method for preparing a vascular graft device
2 seeded ex vivo with vascular smooth muscle cells transduced to express a protein product,
3 comprising the steps of:
4 culturing vascular endothelial cells and vascular smooth muscle cells obtained
5 from a mammalian subject;
6 transducing the smooth muscle cells with a gene which encodes the protein
7 product, operably linked to a promotor;
8 immobilizing on a tubular elongate porous vascular graft device the transduced
9 smooth muscle cells within the pores and interior surface of the graft device; and
10 coating the interior of the graft device having immobilized thereon the transduced smooth
11 muscle cells with the endothelial cells.

1 21. (Thrice Amended) The method of claim 20, further comprising the step
2 of culturing the vascular smooth muscle cells obtained from a mammalian subject in a medium
3 containing autologous serum prior to immobilizing the cells on the vascular graft device.

1 22. (Twice Amended) The method of claim 21, further comprising the step
2 of culturing the vascular endothelial cells obtained from a mammalian subject in a medium
3 containing autologous serum prior to coating the vascular graft device.